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SUBJ/PUBLIC AFFAIRS-NAVAL SERVICE MEDICAL NEWS (NSMN) (95-05)//  
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RMKS/1. THIS SERVICE IS FOR GENERAL DISTRIBUTION OF INFORMATION AND NEWS OF INTEREST TO NAVY AND MARINE CORPS MEMBERS, CIVILIAN EMPLOYEES, FAMILY MEMBERS AND RETIRED BENEFICIARIES OF NAVY MEDICINE. MAXIMUM AND TIMELY REDISTRIBUTION OR FURTHER REPRODUCTION AND USE BY ACTION ADDRESSEES IS ENCOURAGED. THIS MESSAGE HAS BEEN COORDINATED WITH THE COMMANDANT OF THE MARINE CORPS (CMC). THE COMMANDANT HAS AUTHORIZED TRANSMISSION TO MARINE CORPS ACTIVITIES.

2. HEADLINES AND GENERAL INTEREST STORIES THIS WEEK:  
(950030)-Navy Medical Experiment Launches with Space Shuttle  
(950031)-Cooperation and Technology Assist Hurt Sailor  
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HEADLINE: Navy Medical Experiment Launches with Space Shuttle  
NMRDC Bethesda, MD (NSMN) -- On 3 February, at 22 minutes after midnight eastern standard time, the space shuttle Discovery was launched from the Kennedy Space Center in Florida for a nine-day mission. The payload includes an experiment developed by Navy scientists from the Naval Medical Research Institute in Bethesda, MD, who are investigating the growth and development of bone marrow stem cells.

The research findings of this space shuttle experiment can lead in the future to healthier and more productive astronauts aboard the space station and on a manned mission to Mars. The data can also lead to life-saving techniques on the battlefield for casualties of acute bone marrow injury caused by toxic agents or ionizing radiation. Dr. Kelvin P. Lee, head, Stem Cell Biology Branch, NMRI, pointed out: "It has been shown that astronauts exposed to microgravity develop persistent hematologic abnormalities. For example, they become anemic and their lymphocytes don't function normally. The causes are presently unclear, and it is important to know for future missions like the space station. If there is ever a Mars mission, with astronauts in microgravity conditions for 18 months or more, researchers will need to predict what's going to happen."

Astronauts subjected to prolonged periods of actual or

simulated microgravity develop blood cell abnormalities, the most notable are progressive anemia and abnormalities in red blood cell structure. What causes these abnormalities is not known, but changes in the blood-forming organs may be involved.

The goal of the current study is to examine how microgravity affects hematopoiesis. Hematopoiesis, the generation of the cellular components of the blood, occurs within the intricate microenvironment of the bone marrow. Dr. Thomas A. Davis, associate chief of NMRI's Stem Cell Biology Branch, and colleagues at NMRI's Immune Cell Biology Program and Cellco, Inc., Germantown, MD, developed a unique in vitro hematopoietic microenvironment culture system that mimics the bone marrow microenvironment.

Lee said: "Little is known about what actually happens on a cellular basis in the bone marrow at zero gravity. This will be one of the first attempts to look at that. It will be very exciting." NMRI scientists will deploy three sets of human bone marrow cell cultures in low earth orbit. The effects of microgravity on the growth and development of these cells will be examined and compared to identical ground-based controls.

This space shuttle effort is a Navy-Army collaboration. NMRI scientists focus on the medical science of the culture system, where human bone marrow cells are cultured on top of a "feeder" monolayer of microvascular lining cells. The NMRI culture system is being used in conjunction with the Army's cell culture unit -- the Space Tissue Loss Model A. The STL-A, a self-contained cell culture apparatus, was developed at the Walter Reed Army Institute of Research, Division of Surgery, to be placed in a middeck payload on the space shuttle.

"For military deployments, the bone marrow culture system is a perfect device that can be put in forward areas, because it is small and self-contained," said Lee. "If it will work in orbit, it will probably work on a hospital ship. This is a great test of whether or not the system will withstand the rigors of field deployment."

The bone marrow culture system research uses unique Navy resources and seeks to solve problems that are particular to the Navy and the rest of the armed forces. Acute bone marrow injury can be caused by battlefield weapons (chemical, biological and radiation weapons), accidental exposure (ionizing radiation from nuclear reactors) or from other injuries (overwhelming sepsis). Development of this bone marrow culture system may result in a forward deployable treatment that is technically simple and no more demanding than a blood transfusion. The system will be portable and will be used for personnel with acute bone marrow injury without the need for a matched donor.

At present, the only effective therapy for severe bone marrow injury is allogeneic bone marrow transplantation from an uninjured donor. This current therapy is severely limited because only 10 percent of casualties will have a suitably matched bone marrow donor.

Results of this space launch study will aid in the development of new therapies. From a small sample of a patient's own bone marrow, this culture system has the potential of rapidly

growing quantities that can be transplanted back into the patient. This kind of treatment, called ex vivo hematopoietic cell expansion with autologous bone marrow transplantation, would be potentially available to 100 percent of casualties (since their own marrow is used and no donor is necessary) with far fewer complications (i.e., graft vs. host disease) seen with current treatment.

Story by Doris Ryan

Naval Medical Research and Development Command

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HEADLINE: Cooperation and Technology Assist Hurt Sailor

ABOARD USS Constellation (NSMN) -- The benefits computer technology offers the military are usually gauged by how much of an upper hand they give one force over another. Several departments aboard the aircraft carrier USS Constellation (CV 64) recently discovered another facet of computers in the military -- one with the potential to save lives.

A Sailor sustained a severe foot injury in a mishap on the carrier's flightdeck 4 January. The injury occurred while the ship was conducting flight operations in the Indian Ocean.

"He was in a lot of pain when they brought him down from the flightdeck," said LT Peter Woodson, one of the ship's medical officers. "When people sustain a severe injury like his, they're very anxious. Our job was to stabilize him and try to calm him down."

The ship's surgeon, LCDR Bob Chastanet, performed the initial surgery to clean and stabilize the injury.

Concerned over the severity of the injury, Constellation physicians realized the need for an opinion from an orthopedic expert. So Chastanet reviewed the case by phone with specialists at Naval Medical Center San Diego, who recommended a treatment plan until the patient could be seen by a specialist. They also asked to see the X-rays, since the complicated injury was difficult to describe over the phone.

With the ship roughly 9,000 miles from San Diego, delivering the X-rays by mail or aircraft was out of the question. According to CDR John Tueller, the ship's senior medical officer, a new concept called teleradiology has been developed to help the medical community share X-rays over long distances using telecommunications systems. With teleradiology, X-rays are digitized and transmitted electronically by satellite. But Constellation doesn't have this system yet. So Tueller consulted with the embarked staff to explore alternative methods of sending the X-rays to San Diego. When he briefed RADM Michael Bordy, commander, Cruiser-Destroyer Group 1, of the medical condition of the injured Sailor, Bordy suggested using the ship's Joint Deployable Intelligence Support System. JDISS is a telecommunications system used for gathering and disseminating intelligence for a carrier battle group and shore facilities. In an emergency, it can transmit other information.

The Cruiser-Destroyer Group 1 intelligence officer, CDR Stu Yaap, contacted Connie's intelligence officer, CDR Jerry Stoll, and advised him of the situation. Yaap and Stoll then set the

process in motion.

"JDISS allows real-time satellite communications with any other JDISS terminal in the world," said LT Vince Tolbert, the division officer for intelligence specialists who operate the system. JDISS allows users to transmit images while, at the same time, allowing personnel on both ends to "talk" to each other by typing messages on-screen. Tueller knew this was a perfect vehicle to get the X-rays to the orthopedists.

The original idea was to convert the X-rays into electronic images using a scanner, and transmit those images to San Diego. But the scanner wouldn't give the quality of reproduction needed by the physicians on the other end. A suggestion was made to turn the X-rays over to the photo lab, where a higher-quality image could be made.

"Connie's digital photo lab is one of the most technologically advanced in the fleet," said PH2(AW/SW) Michael Strand. Their digital camera was ideal for converting the X-rays into a near-exact electronic representation.

The X-rays were placed on a lighted table and a digital camera was used to take a picture. "The image is stored on a computer chip in the camera," Strand said. "I downloaded that image from the camera into a computer, and from there onto a computer disc."

Strand sent the disc to Connie's carrier intelligence center, where it was uploaded and transmitted to the Fleet Intelligence Training Center Pacific in San Diego -- the closest JDISS terminal-equipped facility to the medical center.

The medical center had already been alerted by electronic mail from the ship that FITPAC would be receiving the images. The orthopedic specialists at San Diego were on hand to view the X-rays as soon as they were received. They confirmed their earlier assessment -- the patient needed to be seen by orthopedic specialists as soon as possible.

A short time later, an S-3B Viking from Sea Control Squadron 38 catapulted from the carrier's flightdeck with the injured Sailor, bound for a shore treatment facility in Bahrain.

Woodson credited the many players in the operation with the successful transfer of X-rays to San Diego. He also mentioned the competent work done by the ship's corpsmen in responding to the injury.

"The JDISS system opens another avenue in communications for ship-based doctors and shore-based facilities," Tueller said.

While Tolbert and his crew knew the JDISS was capable of sending this type of information, it was definitely out of the ordinary. "We knew it had the capability, but it's not routine to transfer other than intelligence information over the JDISS," he said. In an emergency, however, Tolbert said his team was glad to help. "In light of what happened, we gave them another avenue ... another means to take the best course of action to help out this injured young man."

Story by JO2 Jason Emerson

Reprinted from The Compass, 20 January 1995

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HEADLINE: King Remembered at Naval Hospital Corpus Christi

NAVHOSP Corpus Christi, TX (NSMN) -- Dr. Martin Luther King's dream of achieving social equality lives on in the hearts of American sailors. Naval Hospital Corpus Christi took great pride in commemorating the life, dreams and accomplishments of King in a ceremony held at the hospital on 13 January 1995.

Hospital Chaplain LCDR Ron Borden organized the ceremony, which included HMC S.A Beverly as the Master of Ceremonies, command greeting and welcome by Command Master Chief HMCM J.C. Herrera, and special readings by LT P. Trahan, LT A. Coulthirst, HMC K. Meehan, HM3 T. Kennerson and Mr. J. Nious. Special music was presented by Willie Miller and Darryl Sanders, and Executive Officer CAPT E. Berdecio introduced the guest speaker, Father Maurice Shepard of St. Anthony's Parish, Robstown, TX.

Father Shepard challenged those in attendance to make a difference in the community, on the base, in the hospital and in their relationships with others. He asked us to look beyond the external and realize that each person was created by God and is to be valued.

The King Holiday Commission reminds us that at the heart of King's philosophy was the concept of service -- "that everybody could be great because anybody can serve, that one of the best ways to achieve peace and civil unity is for people to help others, however they can."

Commemorating King's achievements reminded hospital personnel that all people should continue to work to achieve his dream. Naval Hospital Corpus Christi and the Navy stand behind the belief that all people deserve to "hear freedom ring." Story by LCDR Ron Borden, CHC

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HEADLINE: Camp Pendleton Honors King with Peace Walk

NAVHOSP Camp Pendleton, CA (NSMN) -- Wednesday, 18 January, a day that Naval Hospital Camp Pendleton had set aside to commemorate the birth and accomplishments of the Reverend Martin Luther King Jr., was sunny and bright. The temperature was in the low 70s and it was a perfect day to walk outdoors. And that's just what a number of personnel did. At noon, a Peace Walk/Service of Remembrance was held in honor of Dr. King, a 1964 Nobel Peace Prize recipient.

This American hero and world-renowned humanitarian significantly contributed to the nation's equal rights movement with his lifetime commitment to challenge racial injustice and seek equal opportunity for all Americans. King truly championed the cause of equality for all people, regardless of their heritage. He never lost faith in the American promise. At the heart of his philosophy was his idea of service -- that all of us can be great because we can serve. People helping others, however they can, is one of the best ways to achieve peace and unity.

The Peace Walk began with a welcome and invocation from Chaplain C.C. Wiggins. Then Dorothy Foster from the CHAMPUS office led everyone in an inspirational rendition of "Lift Every Voice and Sing." Following her song, Foster asked all to join

hands and sing the old civil rights anthem, "We Shall Overcome."  
Then it was time to start the two-mile walk. The Peace  
Walk/Service of Remembrance was closed with a benediction from  
Chaplain W. Shuppert.  
Story by Anne Severy

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HEADLINE: GRAND ROUND ABSTRACTS

CNO Washington (NSMN) -- Chief of Naval Operations ADM Mike Boorda's weekly update 95-5 of 30 January 1995 included some words of advice that should be widely circulated and kept in mind at all levels at all times:

"Communications up and down the chain of command. (Plain English version: Don't shoot the messenger or you won't know the problems you have to work and don't sit in the office and wait for the info to come to you ... it may not.)"

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HSO San Diego (NSMN) -- Secretary of the Navy John H. Dalton last month awarded the Meritorious Unit Commendation to Fleet Hospital 6 for service while deployed to the former Republic of Yugoslavia with Joint Task Force Provide Promise. Staff for Fleet Hospital 6 came from treatment facilities throughout the Healthcare Support Office San Diego region. The citation stated, in part:

"Fleet Hospital 6, the first Navy medical contingent to deploy under the auspices of the United Nations Protection Force during the Balkans conflict, has conspicuously distinguished itself in meeting the myriad challenges associated with providing superior quality, combat zone medical and dental care."

Fleet Hospital 6 personnel deployed in March 1994 and were relieved by Fleet Hospital 5 personnel in September 1994.

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ACP San Francisco (NSMN) -- CAPT John C. Dempsey, MC, (Ret.) and CAPT Thakar G. Patel, MC, were presented Laureate Awards at the Second Annual meeting of the Navy Region of the American College of Physicians (ACP), held 24 October 1994 in San Francisco.

Patel was cited for serving as an outstanding teacher and role model, and for his tireless efforts on behalf of the patient -- to improve patient care, to ensure medical support for military forces in combat, and to enhance readiness capabilities of Navy medicine's operational units.

Dempsey was selected in recognition of his lifetime achievements in the Navy and the many people whose lives he influenced. He has served as a teacher, attending physician and role model for numerous subsequent University Department chairmen, Navy physicians and two governors of the ACP. In addition to the Navy Region Laureate Award, Dempsey was also presented with a 1994 Laureate Award from the Virginia Chapter of the ACP, making him the College's first "double" Laureate.

The Laureate Award is presented to Fellows or Masters of the ACP who have exhibited a continuing commitment to excellence in

education, patient care or research, and contributions to the profession of medicine. Candidates are nominated by the membership of each region or chapter. This is the second highest honor accorded by the College. Becoming an ACP Master is the highest.

Last year's inaugural Laureates of the Navy Region were CAPT Walter Karney, MC, and CAPT John Mitas, MC.

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TRICARE Conference, Washington (NSMN) -- During the TRICARE Conference held in early January, the commanding general of Tripler Army Medical Center, HI, praised the competency and capability of Navy IDCs. As reported by one of the conference's attendees, the general "gave a brief on enrolling the active duty personnel in TRICARE and on using the information systems, principally CHCS, in the evolution of the program. He reported to the group that they had stumbled onto a real resource that they previously had been totally oblivious to -- that resource being the Independent Duty Corpsmen aboard ships homeported in the area. Not only did he allow that the IDCs were the best salesmen for TRICARE because of the respect in which they are held by their shipmates, but he also stated that the Tripler staff had been enlightened as to the very significant capabilities of the IDCs in terms of health care delivery. ... Nothing here that we in the Navy did not already know, but I thought it was remarkable that an Army medical flag officer noticed and thought enough of our people to speak of them this way in a public forum."

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HEADLINE: Navy Medical Department People Involved in Operations BUMED Washington (NSMN) -- Wherever the Navy or Marine Corps goes, so does the Navy Medical Department. Thirty percent of our personnel are normally assigned with deployable fleet and fleet marine forces units. Additional medical support is provided for operations such as Provide Promise in Zagreb. These men and women are on duty around the globe. Here is the latest update on where our medical people are on assignment.

Medical forces currently on operational assignment are:

Operation Able Vigil

Medical/dental augmentation personnel: 59

The Navy Medical Department is in full support of Operation Able Vigil. Eight physicians, nine nurses, two Medical Service Corps officers and 33 hospital corpsmen are deployed at the Naval Hospital and Naval Station located on Guantanamo Bay, providing medical treatment for around 21,000 migrants, in addition to providing medical support to many afloat platforms. Also, seven EPMU (Environmental and Preventive Medicine Unit) people are in Panama -- one environmental health officer, one entomologist and five preventive medicine technicians.

Operation Provide Promise

Medical/dental augmentation personnel: 194

CDR John Coyne, MSC, is the Force Hygiene Officer for the United Nations Protection Force located in country.

A total of 193 medical personnel staff the U.N. Hospital located at Camp Pleso. Medical personnel were taken from Navy Medical commands located throughout the Healthcare Support Office Norfolk and Jacksonville Regions.

#### Operation Joint Task Force Full Accounting

Navy physicians and independent duty corpsmen are supporting this operation by volunteering to serve tours ranging from just under two weeks to two months. Nine missions remain for FY95. Naval Medical Center San Diego and Naval Hospital Camp Pendleton have IDCs in country supporting current missions. The next scheduled mission will be coming out of Commander, Submarine Pacific.

#### Exercise Support

Individuals and components of mobile medical augmentation readiness teams (MMARTs) support various exercises/operations as required, bolstering the "organic" medical assets of the units involved.

Surgical Team Three from Naval Hospital Camp Pendleton and Surgical Team Six from Naval Hospital Charleston are on routine 48-Hour Alert for any emergency situations.

Surgical Team One from Naval Medical Center San Diego is providing medical support for Operation United Shield.

Fleet Surgical Teams are also deployed to provide additional medical support where needed, as directed by the CINCs.

#### Miscellaneous OCONUS and Fleet Support

Providing TAD (temporary additional duty) support to 11 fleet platforms and seven OCONUS facilities are 20 Navy Medical Department personnel: Seven physicians, one MSC, and 12 hospital corpsmen.

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### 3. Two-month calendar of events, anniversaries and observances: FEBRUARY

African-American History Month  
American Heart Month -- "Life. It's What We're Fighting For" (AHA, 1-800-AHA-USA1)  
National Children's Dental Health Month  
Sleep Safety Month (703/683-8371)  
AMD (age-related macular degeneration) Awareness Month  
(Prevent Blindness America, 1-800-331-2020)  
5-11 February: National Burn Awareness Week  
6-17 February: Staff Corps O-6 Selection Board Meets  
7 February: Morning (0600-0800) and Night (until 2200)  
Detailing (EST -- Washington, DC, time)  
8 February 1910: Boy Scouts of America Founded  
8 February 1735: First opera performed in the Colonies, Charleston, SC  
12 February: Lincoln's Birthday (1809)  
12-18 February: Cardiovascular Professional Week (703/891-0079)  
14 February: Valentine's Day  
14 February: National Condom Day (919/361-8400)  
20 February: Holiday -- Presidents' Day  
22 February: Morning (0600-0800) and Night (until 2200)  
Detailing (EST -- Washington, DC, time)



22 February 1732: Washington's Birthday  
23 February 1795: Navy Supply Corps established  
23 February 1945: U.S. Marines raise flag on Mt. Suribachi,  
Iwo Jima  
28 February: Mardi Gras  
28 February: LTjg FitReps Due  
28 February: E-7/E-8 Selection Board Convenes

#### MARCH

Women's History Month  
National/Navy Nutrition Month  
Cataract Awareness Month (Prevent Blindness America, 1-800-331-2020)  
National Chronic Fatigue Syndrome Awareness Month (for information, contact: Orvalene Prewitt, president, National Chronic Fatigue Syndrome Association, 3521 Broadway, Suite 222, Kansas City, MO 64111)  
EDI (electronic data interchange) in Health Care Month (1-800-877-0004)  
Eye Donor Month (202/775-4999)  
Hemophilia Awareness Month (212/219-8180, ext 3006)  
National Kidney Month (1-800-622-9010)  
Mental Retardation Awareness Month  
National Social Work Month (312/422-3777)  
Music in our Schools Month  
1 March: Ash Wednesday  
2 March 1867: Navy Civil Engineer Corps established  
3 March 1871: Navy Medical Corps established  
3 March 1915: Naval Reserve established  
4-5 March: National Easter Seal Telethon (312/726-6200)  
5-11 March: Save Your Vision Week (314/991-4100)  
6-10 March: Newspaper in Education Week  
7 March: E-4 Advancement Exams  
7 March 1945: U.S. 1st Army captures Ludendorff railway bridge across Rhine River at Remagen, only Rhine crossing not blown up by defenders.  
8 March: International Women's Day  
9 March: E-5 Advancement Exams  
9 March 1945: Total of 343 U.S. B-29 Superfortresses carrying all the incendiary bombs they can hold bomb Tokyo.  
14 March: E-6 Advancement Exams  
16 March: Purim  
17 March: Saint Patrick's Day  
19-25 March: Children and Hospitals Week -- "Commitment to Caring" (301/654-6549)  
19-25 March: Poison Prevention Week -- "Everything at Grandma's Isn't Candy"  
20 March, 2114 (EST): Spring Equinox  
23 March 1775: Patrick Henry utters famous "I know not what course others may take, but as for me, give me liberty or give me death" in Richmond, VA.  
26 March - 1 April: Medical Alert Week (1-800-ID ALERT)  
28 March: American Diabetes Alert -- Sound the Alert (1-800-232-3472, ext. 290)  
30 March: Doctors' Day (1-800-423-4992)

31 March: O-1 and O-2 TAR Fitreps Due

31 March: E-5 Evaluations Due

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